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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/623,268	08/30/2000	Frank Filser	00-497	1826
7590 01/02/2004				
Gregory P Lapointe Bachman & LaPointe Suite 1201 900 Chapel Street New Haven, CT 06510-2802			EXAMINER FIORILLA, CHRISTOPHER A	
			ART UNIT 1731	PAPER NUMBER

DATE MAILED: 01/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/623,268	Applicant(s) FILSER ET AL.	
	Examiner Christopher A. Fiorilla	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

1. Claim 33 is objected to because of the following informalities:

In the last line of claim 33, the "1" should be deleted.

Appropriate correction is required.

2. The disclosure is objected to because of the following informalities:

On page 9 of the specification, the material composition subscripts should be corrected.

See e.g. lines 5-7.

Appropriate correction is required.

3. Claims 16-33 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 16-33 use the phrase "the achievable relative density after sintering" to define the enlargement factor, f , recited in the claims. It is submitted that the specification does not enable one skilled in the art to make or use the invention because in order to make or use the invention, one must determine the enlargement factor, which cannot be readily determined because there is no teaching as to how to determine the "achievable relative density after sintering".

4. Claim 33 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The original specification provides no support for the concept of "sintering a further piece of the porous ceramic material under a set of sintering conditions to obtain an achievable relative

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density ps of the ceramic material after sintering” and “sintering under the set of sintering conditions ... the design form of porous ceramic material to obtain a skeletal structure having precise end dimensions”.

5. Claims 16-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Further, the phrase “achievable relative density after sintering” used in claims 16 and 32 is indefinite in that the metes and bounds of this phrase cannot be readily determined. The density after sintering depends on many factors not specifically recited in the claims (e.g. ceramic composition, particle size, sintering temperature, sintering time, sintering pressure).

Claims 16 and 32 are indefinite in that they appear to recite that the enlargement factor is determined independently of the blank of porous ceramic material. This is contradictory to the specification which recites that an individual enlargement factor for each blank is determined even if they are made from the same material (see e.g. page 8, third paragraph).

6. Applicant's arguments filed 10/14/03 have been fully considered but they are not persuasive.

With respect to the 112, first paragraph applicants argue:

With regard to previously submitted independent claim 16, it is respectfully submitted that claim 16 complies with 35 U.S.C. 112, first paragraph. It is difficult to imagine that the Examiner cannot agree that it is within the realm of the skilled article to preprocess a piece of the porous ceramic material under desired sintering conditions in order to determine the achievable relative density prior to carrying out subsequent steps of determining the enlargement factor, scanning and digitizing, enlarging the obtained data, transferring the modified data, etc. If the Examiner is to hold otherwise, it would be appreciated for the Examiner to give detail why he believes that such is not the case. In light of the foregoing comments, it is submitted that claim 16 and the claims which depend therefrom comply with 35 U.S.C. 112, first paragraph.

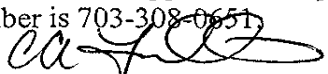
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This argument is not persuasive. Claim 16 recites "selecting a prepared blank of porous ceramic material having a relative density ρ_R and an achievable relative density ρ_s after sintering". Thus, the achievable relative density in this case is referred to as a material property. It is not. It is dependent upon a plurality of conditions such as sintering temperature, sintering time, sintering pressure, material composition, particle size, etc. By applicants' own admission the achievable relative density can vary. The specification at page 6, lines 16-23, recites that "a density from 90 to 100% of the theoretically possible density...can be achieved". Thus, it is maintained that the phrase "achievable relative density" as used in claim 16 does not define a value which can be utilized in equation 1 to determine the shrinkage factor. Applicants' comments on preprocessing above are not relevant to the instant rejection for the above reasons.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher A. Fiorilla whose telephone number is (571) 272-1187. The examiner can normally be reached on M-F, 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.


Christopher A. Fiorilla
Primary Examiner
Art Unit 1731

caf